



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,271	12/28/2001	Alex Hornig	HORN3084/EM	4082

7590 06/13/2002

Bacon & Thomas
625 Slaters Lane - 4th Floor
Alexandria, VA 22314

EXAMINER

NGUYEN, HANH N

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 06/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/029,271

Applicant(s)

HORNG ET AL.

Examiner

HANH NGUYEN

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1,2,4,7 are rejected under 35 U.S.C. 102(b) as being anticipated by Muller.

Regarding claim 1, Muller discloses a rotation shaft support structure of a motor, comprising: a shaft tube (18 in Fig. 1), having an inner wall provided with at least one bearing (hydrodynamic bearing between the shaft and the shaft tube) in which a rotation shaft (9) may be rotated; a seal member (23), made of metallic material and securely combined on one end of the shaft tube (18); and a support member (19), made of a wear resistant non-metallic material (plastic), mounted in one end of the shaft tube, and supported by the seal member (23), the support member having a resting portion (top surface of support member 19) which has a periphery (the perimeter of a circle) provided with an annular wall (because the support member 19 has a cylindrical shape), and one end of the rotation shaft being rested on the resting portion.

Regarding claim 2, Muller also shows the rotation shaft support structure of a motor wherein the seal member has a recess (the hollow portion) and has a periphery provided with an annular wall, and the support member may be placed in the recess.

Art Unit: 2834

Regarding claim 4, Muller also shows the rotation shaft support structure of a motor wherein the area circled by the annular wall of the support member is slightly greater than the outer diameter of the rotation shaft (as can be seen clearly in Fig. 1).

Regarding claim 7, Muller also shows the rotation shaft support structure of a motor wherein the annular lip of the support member is rested on the annular wall of the seal member.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller in view of Umeda et al.

Regarding claim 5, Muller shows all limitations of the claimed invention except showing the rotation shaft support structure of a motor wherein the support member (30 in Fig. 1 and 2) is formed with a cup-shape or a bowl-shape.

However, Umeda et al. disclose the rotation shaft support structure of a motor wherein the support member is formed with a cup-shape or a bowl-shape for the purpose of securing the shaft.

Since Muller and Umeda et al. are in the same field of endeavor, the purpose disclosed by Umeda et al. would have been recognized in the pertinent art of Muller.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Muller by forming a support member with a cup-shape or a bowl-shape as taught by Umeda et al. for the purpose of securing the shaft.

Regarding claim 6, the support member (30) in Fig. 2 is also formed with an inverter hat-shape, and has a resting portion (50) and an annular lip.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Muller in view of Papst et al.

Regarding claim 6, Muller shows all limitations of the claimed invention except showing the rotation shaft support structure of a motor wherein the annular wall of the support member is formed by multiple separable plates which may be bent and may be rested on the inner wall of the seal member.

However, Papst et al. disclose the rotation shaft support structure of a motor wherein the annular wall of the end plate (42) is formed by multiple separable plates (42) which may be bent to form a cylindrical shape and may be rested on the inner portion of the slip ring for the purpose of simplifying the production process.

Since Muller and Papst et al. are in the same field of endeavor, the purpose disclosed by Papst et al. would have been recognized in the pertinent art of Muller.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Muller by forming a support member with multiple separable plates which may be bent and may be rested on the inner wall of the

Art Unit: 2834

seal member as taught by Papst et al. for the purpose of simplifying the production process.

Conclusion


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (703) 305-3466. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

HNN

June 5, 2002


NESTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800